SELECTING A PROFILE MODEL FOR USE IN OPTICAL METROLOGY USING A MACHINE LEARNING SYSTEM

ABSTRACT

A profile model can be selected for use in examining a structure formed on a semiconductor wafer using optical metrology by obtaining an initial profile model having a set of profile parameters. A machine learning system is trained using the initial profile model. A simulated diffraction signal is generated for an optimized profile model using the trained machine learning system, where the optimized profile model has a set of profile parameters with the same or fewer profile parameters than the initial profile model. A determination is made as to whether the one or more termination criteria are met. If the one or more termination criteria are met, the optimized profile model is modified and another simulated diffraction signal is generated using the same trained machine learning system.